REMARKS

Reconsideration of this application is respectfully requested.

Please note that the applicant's priority document was filed on July 27, 2009 in response to the examiner's helpful reminder in the Office Action.

With regard to the claims, claims 14-22 were rejected under 35 USC §103(a) based on a combination of U.S. patent 6,639,236 to *Low et al* and U.S. patent 7,425,195 *Wissman et al*.

Claims 1-24 were rejected for non-statutory obviousness-type double patenting based on applicant's U.S. patent 7,354,544. In response to the double patenting rejection applicant submits a Terminal Disclaimer which is attached to this Amendment. Withdrawal of the double patenting rejection is thus respectfully requested.

Based on applicant's submission of the Terminal Disclaimer it is understood that claims 1-7, 9-13 and 23-24 are allowable, since such claims were not rejected on the basis of any other prior art.

It is also understood that newly added dependent claims 25-28 which depend on claim 3 are allowable for reasons supporting allowance of claim 3.

Prior to discussing the examiner's rejection of claims 14-22 for obviousness under 35 USC §103(a) it may be helpful to briefly summarize the novel aspects and features of the invention as defined in claims 14-22.

Applicant shows a container for long-term storage of radioactive material. In one embodiment of the invention, as shown in Fig 2b, the container 1 includes an inner container part 2, an outer container part 3 and a middle or inter-space container part 4 that is sandwiched between the inner container part 2 and the outer container part 4.

The inner container part 2 and the outer container part 3 are molded from a plastic material, and the middle or inter-space container

part 4 is molded from a radiation inhibiting material which can be one of lead, lead alloy, tin and tin alloy.

Of particular significance in applicant's invention is the fact that the inner container part 2, the outer container part 3 and the middle or inter-space container part 4 of a storage container 1 is substantially identical to corresponding container parts of other storage containers 1 formed in the same moulds.

Thus the resulting storage container 1, when mass produced in moulds is always a uniform structure similar in all respects to each and every other mass produced storage container 1. Therefore, whether there are a hundred storage containers 1, or a thousand storage containers 1, for example, made in accordance with applicant's claims, each and every storage container 1 that is formed in the same moulds is substantially identical and provides substantially the same protection as the other storage containers 1 that are formed in the same moulds.

With regard to the patents cited by the examiner, *Low et al* shows in Fig. 2, a plastic receptacle 5 coated with a lead layer 7 formed by an electroplating process. Another layer 9 of epoxy resin is coated onto the lead layer 7. The lead layer coating 7 and the epoxy layer coating 9 are not moulded layers.

The disadvantages of the *Low et al* structure are that the electroplating of lead is a very slow process, especially if the electroplated lead layer is to have any substantial thickness greater than the 6 mm prescribed by *Low et al* (col. 1, lines 41-43). Furthermore the application of the epoxy resin coating is a slow and tedious operation that is usually done manually or by spraying. A further disadvantage is that the epoxy coating requires considerable time for the epoxy to set.

It should also be noted that the *Low et al* cap and the container do not form a fully satisfactory radiation shield because there is no labyrinth sealing.

It is apparent that the *Low et al* container is for typically low radiation waste since the lead layer 7 has a thickness of 0.01-6mm. Also electroplating of lead is not practical for high radiation level waste which generally requires layers of lead that are substantially thicker than 6mm. Thus electroplating of lead would not be feasible where relatively thick layers of lead are required. Furthermore if relatively thick layers of lead are formed by electroplating it would be quite difficult to obtain a uniform thickness. Without uniform thickness, especially at the outer container part, hot spots can result, which could be dangerous for the user.

In summary, the electroplating of lead and the coating of epoxy resin as shown in *Low et al* are extremely slow operations, especially if done manually. Furthermore the containers made in accordance with the teachings of *Low et al* are generally suitable only for short-term storage of radioactive waste and are not likely to withstand rough handling. Thus the *Low et al* container can accommodate only relatively small volumes of radioactive waste, for relatively short periods of time.

The examiner acknowledges at the bottom of page 2 of the Office Action that *Low et al* does not teach that the container parts can be formed by injection or pressure molding and therefore cites *Wissman et al*.

Wissman et al shows a radiation shielding device 10 with an outer member 30 and a removable inner member 32, which accommodates a seed cartridge 20. There is no showing or suggestion in *Wissman et al* of a composite three layer structure wherein all three layers form an integral shell and wherein the outer container part 3 is directly molded onto a subassembly of the inner container part 2 and the inter-space container part 4.

However, *Wissman et al* at column 5, line 66, to column 6, line 4 states that,

> *"The devices can be made using any process that produces shaped articles. Suitable processes include...drawing,*

stamping, forming, molding by injection...compression or transfer molding, machining, milling or lathing or a combination of such procedures."

After making the previously quoted general statement regarding manufacturing processes *Wissman et al* does not provide specific teachings regarding any of the manufacturing process categories that he generally identifies by category.

Applicant respectfully submits that the identification by *Wissman et al* of general manufacturing processes teaches nothing about the intricacies of such processes to solve specific problems.

One need only refer to the particular classes and subclasses of patents relating to the manufacturing process categories generally referred to by *Wissman et al* such as drawing, stamping, forming, molding by injection, compression or transfer, machining, milling or lathing to ascertain that numerous patents have been granted that relate to these processes. Many of these patents are directed to the solution of problems by specific techniques and apparatus that may fall within a general category of manufacturing but are unobvious to persons skilled in the art.

Thus the mere identification of a manufacturing category does not provide the teachings that show, suggest or anticipate the inventions and inventive solutions to problems that have been patented in classes and subclasses that relate to such manufacturing categories.

With regard to the claims 14-22, rejected under 35 USC §103(a), applicant's independent claim 14 defines a storage container for long-term storage of radioactive material and requires,

"...an integral inner container part of a first material with a bottom and upright wall...an integral outer container part of a second material with a bottom and upright wall,...a radioactive radiation inhibiting material in an inter-space between the walls and bottoms of said inner and outer storage container part,...said radioactive radiation inhibiting material is in the form

of...moulded...integral inter-space container having a bottom and an upright wall...*and being fitted onto the outside of the inner container part,...said outer container part is...moulded onto the outside of the inter-space container part when the inter-space container part is fitted onto the outside of the inner container part."*

Claim 14 thus requires a storage container that includes inner and outer container parts that sandwich an inter-space container part formed of a radioactive radiation inhibiting material. Claim 14 also requires that the inter-space container part is fitted onto the outside of the inner container part and the outer container part is moulded on the outside of the inter-space container part when the inter-space container part is fitted on the outside of the inner container part.

It is noted that *Wissman et al* identifies a categorical list of manufacturing processes for manufacturing anything from paper clips to computers. However *Wissman et al* does not provide know how or specific techniques for solving particular problems, such as the problems dealt with by applicant to provide a storage container for long-term storage of radioactive material that is of uniform size, shape and cross-sectional dimension, when composed of three container parts.

Thus although *Wissman et al* states that an article can be made by moulding, there is no showing or suggestion of the specific techniques or structures defined in applicant's claim 14 for the storage container for long-term storage of radioactive material.

More specifically there is no showing or suggestion in *Wissman et al* of a moulded inter-space container part and an outer container part that is overmoulded onto the inter-space container part after the inter-space container part has been assembled to the first container part.

It is thus submitted that claim 14 is allowable over the combination of *Low et al* and *Wissman et al* and any of the other patents of record in this application.

Allowance of claim 14 is thus respectfully requested.

Claims dependent on claim 14 are also submitted as allowable for the reasons supporting allowance of claim 14 as well as the distinctions defined therein.

For example claim 15 requires that the outside face of the outer container part have threads to engage threads on a lid and that the outer container part has locking means for locking with the lid when the lid is fully screwed onto the container.

Claim 19 requires that the radioactive radiation inhibiting material be one of lead, lead alloy, tin and tin alloy.

Claim 21 requires that the storage container first and second materials be selected from high density polyethylene and ceramic material.

Allowance of the dependent claims 15, 19 and 21 is thus respectfully requested.

In view of the foregoing remarks and amendments it is submitted that this application is in condition for allowance and allowance thereof is respectfully requested.

Respectfully submitted,
/Philip Rodman/
Philip Rodman Reg. No. 25,704
Attorney For Applicant

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RODMAN & RODMAN
10 Stewart Place – Suite 2CE
White Plains, New York 10603

Telephone: (914) 949-7210
Facsimile: (914) 993-0668
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